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10/560,156	09/18/2006	Helmut Konopa	2003P00855WOUS	9474

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EXAMINER	
BELL, CHARLES NEWTON	
ART UNIT	**PAPER NUMBER**
3744	
MAIL DATE	**DELIVERY MODE**
01/13/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/560,156	KONOPA, HELMUT	
	Examiner	Art Unit	
	CHARLES BELL	3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 December 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *12-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *12-27* is/are rejected.

7)☒ Claim(s) *25* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 December 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/09/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 25 is objected to because of the following informalities: "the duty cycle" in ln 2 of the claim is construed to read --a duty cycle--. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 12-13, 17-18, 20-23 and 26-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Whipple, III (U. S. Pat. No. 5,711,159).

In regard to claim 12, the FIGURE of Whipple, III and Modified FIGURE of Whipple, III, attached, discloses a no-frost refrigeration device (100, and see col. 3, ln. 49, and col. 6, ln. 28-34), comprising: a storage compartment (110, and see col. 3, ln. 53); an evaporator (152, and see col. 4, ln. 25) which is alternately activated (see col. 1, ln. 24-28) and deactivated located (100, and see FIGURE) in a chamber separated from a storage compartment; a fan (154, and see col. 4, ln. 35); and a control circuit (165, and see col. 5, ln. 24 and 42-46) which makes an average circulation power of a fan variable during an activation phase of a evaporator.

In regard to claim 21, the FIGURE of Whipple, III and Modified FIGURE of Whipple, III, attached, discloses a refrigeration device (100, see col. 6, ln. 28-34) capable of performing a method (160, and see col. 3, ln. 50-51) for operating a refrigeration device (100, see col. 6, ln. 28-34), including a storage compartment (110, and see col. 3, ln. 53); an evaporator (152, and see

col. 4, ln. 2) which is alternately activated (see col. 1, ln. 24-27) and deactivated located (100, and see FIGURE) in a chamber separated from a storage compartment; a fan (154, and see col. 4, ln. 35); a control circuit (165, and see col. 5, ln. 24 and 42-46) which makes an average circulation power of a fan variable during an activation phase of an evaporator, comprising the steps of: a) estimating (via 175 and 165, and see col. 5, ln. 65-67, and col. 6, ln. 1-7) a moisture value in a storage compartment; b) selecting (via 165, and see col. 5, ln. 42-46) a circulating power for a fan as a function of an estimated moisture value; and c) operating (see col. 5, ln. 42-46) a fan at a selected circulating power.

In regard to claims 13 and 23, Whipple, III discloses a no-frost refrigeration device, including a fan that can be switched off (see col. 5, ln. 39-40) temporarily during an activated phase of an evaporator (as per claim 13); a refrigeration device capable of performing a method of switching a fan off temporarily during an activated phase of an evaporator (as per claim 23).

In regard to claim 17-18, the FIGURE of Whipple, III discloses a no-frost refrigeration device, including an activation phase of an evaporator and a fan can be set to different non-zero speeds (via 165, and see col. 5, ln. 42-46), (as per claim 17); including a control circuit for controlling the operation of an evaporator and a fan is set to operate a fan at one of a plurality of selectable non-zero speeds when an evaporator is activated (as per claim 18).

In regard to claim 20, the FIGURE of Whipple, III discloses a no-frost refrigeration device, including a control circuit coupled to an air conditioning sensor (176, and see col. 6, ln. 19-27) and a control circuit regulates the speed of a fan using at least one air conditioning parameter recorded by a sensor.

In regard to claim 22, the FIGURE of Whipple, III discloses a no-frost refrigeration device capable of performing a method, including selecting (via 165 and 175, and see col. 5, ln. 42-46) a circulating power to be lower, the higher an estimated moisture value.

In regard to claims 26-27, the FIGURE of Whipple, III discloses a no-frost refrigeration device capable of performing a method, including setting (via 165, and see col. 5, ln. 42-46) an activation phase of an evaporator and a fan to different non-zero speeds (as per claim 26); and capable of controlling the operation of an evaporator and a fan and operating a fan at one of a plurality of selectable non-zero speeds when an evaporator is activated (as per claim 27).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 14-16, 19 and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Whipple, III in view of Shima et al. (U. S. Pat. No. 5,931,011).

In regard to claims 14 and 24, it is noted that Whipple, III does not specifically disclose a no-frost refrigeration device, including a control circuit controlling the operation of an evaporator and a fan set up to intermittently operate a fan during an activated phase of an evaporator (as per claim 14); a method, including controlling the operation of an evaporator and intermittently operating a fan during an activated phase of an evaporator (as per claim 24). However, Figs. 2-3 of Shima et al. teach an evaporator (13, and see col. 4, ln. 61-62), an intermittently operating fan (18, and see col. 5, ln. 2,and col. 7, ln. 1-4), which by inherency has a duty cycle, and a control circuit (20A, and see col. 5, ln. 9-10), which intermittently operates a fan during an activated phase of an evaporator. Hence, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the apparatus of Whipple, III with a control circuit, evaporator and fan as taught by Shima et al. in order to achieve a device and method that would provide a refrigerator with intermittent fan operation based on various operating parameters, therefore allowing a refrigerator to operate more efficiently and therefore more economically.

In regard to claims 15 and 19, it is noted that Whipple, III does not specifically disclose a no-frost refrigeration device, including a selector switch on which a duty cycle can be set for an intermittent operation of a fan (as per claim 15); including a selector switch on which a speed for operation of a fan can be set (as per claim 19). However, Fig. 2 of Shima et al. teaches a switch (25, and see col. 5, ln. 17). Hence, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the apparatus of Whipple, III with a switch as taught by Shima et al. in order to achieve a device capable of setting a duty cycle that would

provide a refrigerator that provides the user with the ability to further control fan operation, and therefore allow a refrigerator to operate more efficiently and more economically.

In regard to claim 16, the FIGURE of Whipple, III discloses a no-frost refrigeration device including a control circuit coupled to an air conditioning sensor (176, and see col. 6, ln. 19-27).

It is noted that Whipple, III does not specifically disclose a no-frost refrigeration device wherein a control circuit regulates a duty cycle as a function of an air conditioning parameter recorded by a sensor. However, Fig. 1 of Shima et al. teaches a fan (18, and see col. 5, ln. 2) which intermittently operates (see col. 7, ln. 1-4) and by inherency has a duty cycle. Hence, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the apparatus of Whipple, III with a fan which intermittently operates as taught by Shima et al. in order to achieve a device capable of regulating a duty cycle based on an air conditioning parameter, and therefore provide a refrigerator that operates more efficiently and therefore more economically.

In regard to claim 25, the FIGURE of Whipple, III discloses a no-frost refrigeration device capable of performing a method, including sensing (176, and see col. 6, ln. 19-27) an air conditioning parameter.

It is noted that Whipple, III does not specifically disclose a method for operating a refrigeration device and regulating a duty cycle as a function of a sensed air conditioning parameter. However, Fig. 1 of Shima et al. teaches a fan (18, and see col. 5, ln. 2) which intermittently operates (see col. 7, ln. 1-4) and by inherency has a duty cycle. Hence, it would

have been obvious to one having ordinary skill in the art at the time the invention was made to provide the apparatus of Whipple, III with a fan which intermittently operates as taught by Shima et al. in order to achieve a device capable of regulating a duty cycle based on an air conditioning parameter that would provide a refrigerator that operates more efficiently and therefore more economically.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHARLES BELL whose telephone number is (571)270-5538. The examiner can normally be reached on 7:00AM - 4:30PM EST Monday through Thursday.

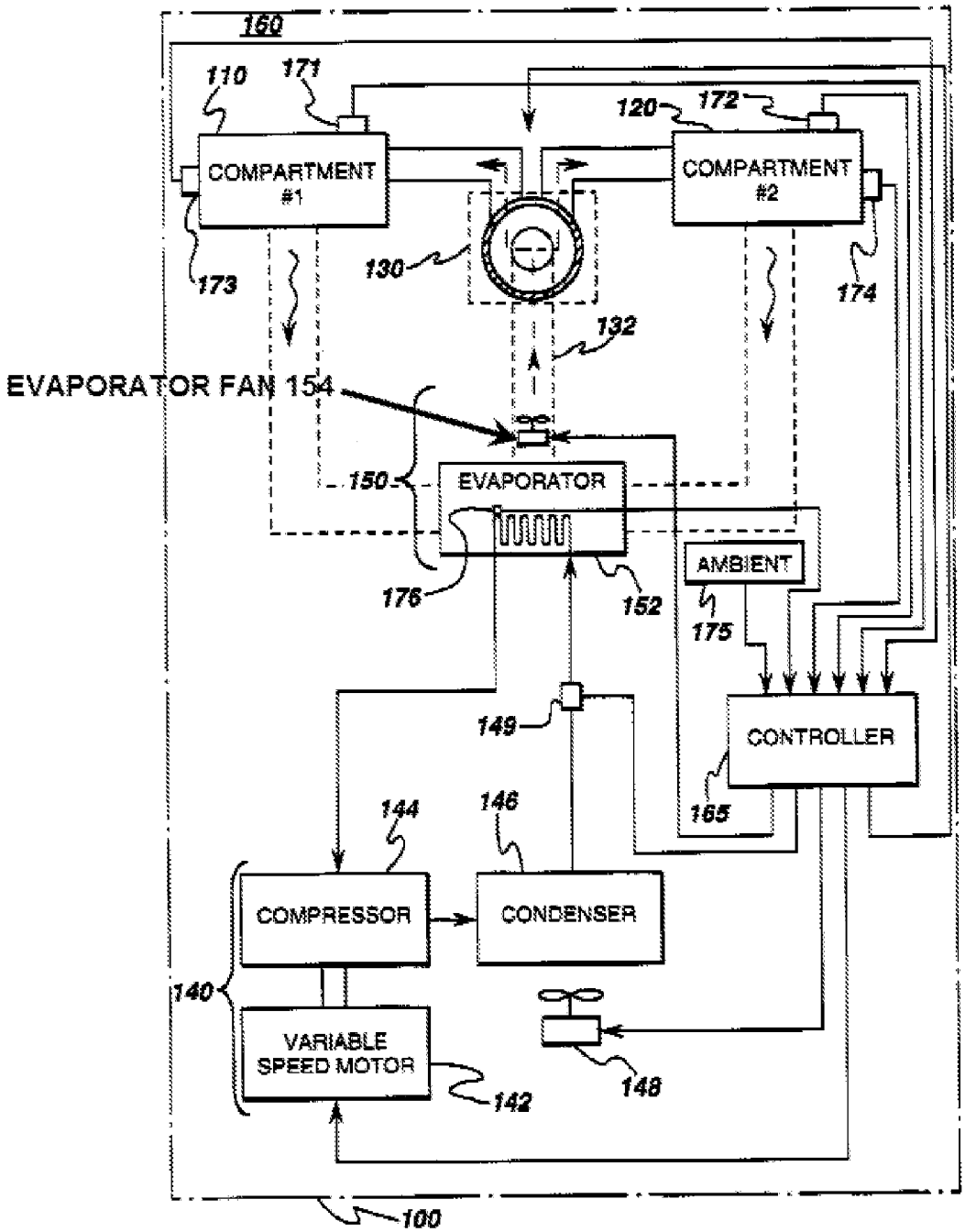
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frantz Jules or Cheryl Tyler can be reached on (571)272-6681 or (571)272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. B./

Examiner, Art Unit 3744

/Frantz F. Jules/
Supervisory Patent Examiner, Art Unit 3744



Modified FIGURE of Whipple,III